Appendix A
Emission Trends

TABLE 10 EMISSIONS TRENDS (CO_2)
(Sheet 1 of 5)
(Part 1 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg									
1. Energy	**4,830,463.65**	**4,797,772.12**	**4,894,421.31**	**5,026,716.65**	**5,103,983.53**	**5,154,192.67**	**5,341,931.95**	**5,407,934.05**	**5,448,279.22**	**5,527,589.28**
A. Fuel Combustion (Sectoral Approach)	4,824,658.59	4,791,898.96	4,889,114.46	5,019,920.64	5,097,120.91	5,145,205.92	5,333,482.87	5,400,050.40	5,441,713.05	5,520,846.48
1. Energy Industries	1,795,514.03	1,791,841.24	1,804,521.58	1,884,778.53	1,911,285.04	1,926,381.19	1,997,372.76	2,066,327.31	2,154,894.35	2,165,584.61
2. Manufacturing Industries and Construction	851,114.88	820,172.80	874,057.19	865,307.09	871,174.02	876,389.22	918,750.19	912,431.43	871,919.08	849,811.39
3. Transport	1,413,240.29	1,385,651.43	1,431,515.50	1,481,263.62	1,519,392.86	1,548,355.01	1,584,231.84	1,601,594.88	1,629,624.36	1,693,297.10
4. Other Sectors	560,574.62	571,043.83	576,871.67	585,861.58	578,965.87	579,563.37	620,733.97	599,063.30	551,234.11	570,920.52
5. Other	204,214.77	213,189.67	201,548.51	204,718.82	215,903.12	214,537.13	212,313.92	220,633.48	234,041.15	241,833.06
B. Fugitive Emissions from Fuels	5,805.06	5,873.16	5,306.85	6,786.82	6,862.62	8,986.76	8,529.28	7,873.65	6,566.19	6,942.79
1. Solid Fuels	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2. Oil and Natural Gas	5,805.06	5,873.16	5,306.85	6,786.82	6,862.62	8,986.76	8,529.28	7,873.65	6,566.19	6,942.79
2. Industrial Processes	**174,791.23**	**164,064.88**	**163,275.30**	**160,590.15**	**167,670.45**	**171,896.92**	**166,796.32**	**172,944.33**	**171,896.90**	**167,450.15**
A. Mineral Products	54,195.19	52,614.59	53,181.47	55,228.29	57,676.50	61,320.82	62,635.64	63,611.55	64,911.37	65,757.41
B. Chemical Industry	25,523.61	25,110.36	26,329.81	26,747.48	27,919.36	27,317.42	27,166.51	27,926.24	29,462.50	28,047.48
C. Metal Production	95,272.43	86,339.93	83,764.02	78,614.38	82,074.59	82,459.48	76,994.17	81,406.55	77,523.03	73,665.25
D. Other Production	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
3. Solvent and Other Product Use	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry[2]	**-910,373.10**	**-908,515.44**	**-872,606.25**	**-751,969.44**	**-747,840.43**	**-614,886.87**	**-603,849.95**	**-641,272.35**	**-744,041.71**	**-765,692.34**
A. Forest Land	-563,339.86	-574,330.65	-530,219.65	-409,757.66	-397,597.11	-285,402.91	-272,053.43	-300,736.28	-412,697.88	-423,203.94
B. Cropland	-31,632.43	-31,680.75	-32,216.90	-34,027.79	-33,772.41	-29,199.57	-29,119.57	-29,538.60	-27,385.35	-27,409.07
C. Grassland	-22,154.74	-22,251.06	-22,311.10	-22,417.88	-22,492.53	-13,548.90	-13,573.07	-13,587.94	-13,602.81	-13,643.71
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
E. Settlements	-83,187.81	-82,294.14	-85,107.59	-82,084.07	-83,138.29	-83,518.30	-81,518.27	-84,838.19	-84,232.80	-86,773.77
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	-210,058.25	-197,978.84	-202,751.02	-203,682.04	-210,440.09	-203,216.99	-207,585.69	-212,731.34	-206,122.86	-214,661.85
6. Waste	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**
A. Solid Waste Disposal on Land	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Waste-water Handling										
C. Waste Incineration	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Other non-specified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CO_2 emissions including net CO_2 from LULUCF[3]	**4,094,881.78**	**4,053,321.56**	**4,185,090.35**	**4,435,337.16**	**4,523,813.55**	**4,710,482.73**	**4,904,878.32**	**4,939,596.13**	**4,876,134.41**	**4,929,347.08**
Total CO_2 emissions excluding net CO_2 from LULUCF[3]	**5,005,254.88**	**4,961,837.00**	**5,057,696.60**	**5,187,306.61**	**5,271,653.98**	**5,325,369.59**	**5,508,728.27**	**5,580,868.48**	**5,620,176.12**	**5,695,039.42**
Memo Items:										
International Bunkers	**113,582.67**	**119,859.04**	**109,722.60**	**99,751.86**	**97,724.81**	**100,678.57**	**102,294.91**	**109,858.16**	**114,557.44**	**105,228.61**
Aviation	46,230.19	46,521.67	46,900.62	47,481.50	48,035.25	50,749.98	52,186.06	55,898.55	56,657.37	58,799.49
Marine	67,272.48	73,337.37	62,821.98	52,270.36	49,689.56	49,928.59	50,108.85	53,959.61	57,900.06	46,428.92
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
CO_2 Emissions from Biomass	**216,702.82**	**217,567.47**	**228,141.27**	**222,383.36**	**231,283.15**	**243,502.30**	**244,305.64**	**233,243.16**	**217,201.03**	**222,360.14**

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (CO_2)
(Sheet 1 of 5)
(Part 2 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg					%
1. Energy	**5,658,886.35**	**5,642,663.67**	**5,663,383.81**	**5,750,038.56**	**5,835,334.67**	**20.80**
A. Fuel Combustion (Sectoral Approach)	5,692,317.61	5,636,569.62	5,657,080.21	5,723,937.59	5,829,300.81	20.82
1. Energy Industries	2,269,311.57	2,237,292.82	2,233,455.50	2,262,197.79	2,290,619.61	27.57
2. Manufacturing Industries and Construction	862,564.74	861,167.85	842,119.24	844,620.59	863,461.40	1.45
3. Transport	1,738,562.74	1,725,588.49	1,771,756.85	1,772,254.33	1,825,651.34	29.18
4. Other Sectors	595,143.90	586,388.01	584,324.43	614,563.10	595,585.26	6.25
5. Other	232,334.67	226,212.45	225,424.19	230,301.78	254,003.20	24.38
B. Fugitive Emissions from Fuels	5,768.54	6,094.04	6,203.59	6,090.97	6,033.86	3.94
1. Solid Fuels	NE	NE	NE	NE	NE	0.00
2. Oil and Natural Gas	5,768.54	6,094.04	6,203.59	6,090.97	6,033.86	3.94
2. Industrial Processes	**166,378.73**	**152,528.56**	**152,605.17**	**147,648.81**	**152,649.74**	**-12.67**
A. Mineral Products	64,852.48	64,065.15	65,230.52	64,901.51	70,163.13	29.46
B. Chemical Industry	27,007.54	23,539.05	25,774.86	22,853.69	24,758.35	-2.23
C. Metal Production	74,518.71	64,924.36	61,599.79	59,893.61	57,728.26	-39.41
D. Other Production	NE	NE	NE	NE	NE	0.00
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
3. Solvent and Other Product Use	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**0.00**
4. Agriculture						
A. Enteric Fermentation						
B. Manure Management						
C. Rice Cultivation						
D. Agricultural Soils						
E. Prescribed Burning of Savannas						
F. Field Burning of Agricultural Residues						
G. Other						
5. Land-Use, Land-Use Change and Forestry[1]	**-759,506.65**	**-767,987.44**	**-768,638.59**	**-774,847.66**	**-780,094.17**	**-14.31**
A. Forest Land	-420,195.58	-420,195.58	-420,195.58	-420,195.58	-420,195.58	-25.41
B. Cropland	-28,944.42	-30,595.97	-30,328.23	-31,503.42	-31,759.51	0.40
C. Grassland	-13,685.35	-13,726.78	-13,769.66	-13,814.02	-13,859.92	-37.44
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
E. Settlements	-85,865.99	-89,677.60	-89,936.27	-93,758.29	-97,311.28	16.98
F. Other Land	NE	NE	NE	NE	NE	0.00
G. Other	-210,815.31	-213,793.50	-214,408.85	-215,578.36	-216,967.88	5.29
6. Waste	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**IE,NA**	**0.00**
A. Solid Waste Disposal on Land	NA	NA	NA	NA	NA	0.00
B. Waste-water Handling						
C. Waste Incineration	IE	IE	IE	IE	IE	0.00
D. Other	NA	NA	NA	NA	NA	0.00
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**0.00**
Other non-specified	NA	NA	NA	NA	NA	0.00
Total CO_2 emissions including net CO_2 from LULUCF[2]	**5,104,958.25**	**5,027,204.79**	**5,047,259.39**	**5,102,839.71**	**5,107,890.25**	**27.18**
Total CO_2 emissions excluding net CO_2 from LULUCF[2]	**5,864,464.88**	**5,795,191.21**	**5,815,888.98**	**5,877,677.37**	**5,887,984.41**	**19.65**
Memo Items:						
International Bunkers	**101,366.67**	**97,814.95**	**89,488.77**	**84,683.30**	**94,498.89**	**-16.74**
Aviation	60,507.03	59,337.45	61,787.41	59,448.46	59,911.60	29.59
Marine	40,859.44	38,477.49	27,701.36	24,634.85	34,587.29	-48.59
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**0.00**
CO_2 Emissions from Biomass	**226,764.85**	**200,478.81**	**194,351.10**	**202,110.66**	**211,229.93**	**-2.53**

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (CH_4)
(Sheet 2 of 5)
(Part 1 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg									
Total CH_4 emissions	**29,431.60**	**29,436.93**	**29,668.61**	**28,899.39**	**29,161.28**	**28,997.40**	**28,533.54**	**28,039.31**	**27,594.86**	**27,093.90**
1. Energy	**12,458.65**	**12,366.48**	**12,225.90**	**11,660.87**	**11,716.55**	**11,696.29**	**11,687.13**	**11,613.55**	**11,210.59**	**10,800.17**
A. Fuel Combustion (Sectoral Approach)	598.51	599.51	613.80	588.13	581.13	590.66	593.59	588.13	506.50	508.29
1. Energy Industries	26.95	26.67	26.77	28.09	28.49	27.29	28.38	29.36	31.28	31.34
2. Manufacturing Industries and Construction	108.98	107.62	111.46	114.20	115.70	119.27	122.34	125.45	117.61	115.74
3. Transport	213.91	207.77	207.94	204.93	201.21	195.01	188.87	178.42	169.84	161.91
4. Other Sectors	244.74	253.59	263.90	237.19	231.96	247.59	252.67	203.47	184.31	195.84
5. Other	3.71	3.86	3.74	3.72	3.77	3.48	3.33	3.43	3.46	3.46
B. Fugitive Emissions from Fuels	11,860.34	11,766.96	11,612.10	11,072.74	11,135.42	11,105.65	11,093.54	10,875.42	10,704.09	10,291.87
1. Solid Fuels	4,186.17	4,056.25	3,984.15	3,429.25	3,487.42	3,522.95	3,407.47	3,341.12	3,317.66	3,136.97
2. Oil and Natural Gas	7,674.17	7,710.72	7,627.95	7,643.49	7,648.00	7,580.70	7,686.06	7,534.30	7,386.43	7,154.90
2. Industrial Processes	**119.57**	**114.42**	**120.20**	**126.99**	**132.65**	**135.95**	**137.40**	**138.64**	**137.50**	**137.78**
A. Mineral Products	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
B. Chemical Industry	56.77	58.91	61.63	67.29	72.36	73.68	76.98	79.09	80.69	82.02
C. Metal Production	62.80	55.51	58.57	59.70	60.29	62.27	60.42	59.55	57.21	55.77
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
3. Solvent and Other Product Use										
4. Agriculture	**7,468.13**	**7,519.49**	**7,621.28**	**7,585.55**	**7,833.34**	**7,969.44**	**7,759.78**	**7,759.86**	**7,828.99**	**7,810.10**
A. Enteric Fermentation	5,612.36	5,578.70	5,685.69	5,658.36	5,734.01	5,856.34	5,740.31	5,635.55	5,558.80	5,562.85
B. Manure Management	1,483.72	1,578.88	1,524.66	1,563.53	1,669.47	1,718.70	1,651.88	1,731.57	1,848.35	1,815.97
C. Rice Cultivation	339.21	333.19	374.79	334.24	391.13	392.90	331.73	356.24	376.26	369.87
D. Agricultural Soils	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
E. Prescribed Burning of Savannas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F. Field Burning of Agricultural Residues	32.83	30.73	36.14	29.02	38.73	31.50	35.84	36.51	37.58	36.51
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5. Land Use, Land-Use Change and Forestry	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**
A. Forest Land	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
B. Cropland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
C. Grassland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
E. Settlements	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**9,385.24**	**9,436.55**	**9,501.22**	**9,525.99**	**9,478.74**	**9,195.71**	**9,019.63**	**8,727.25**	**8,424.58**	**8,345.75**
A. Solid Waste Disposal on Land	8,205.61	8,209.12	8,219.31	8,208.67	8,104.02	7,772.54	7,557.44	7,217.94	6,874.39	6,743.43
B. Waste-water Handling	1,179.63	1,227.43	1,281.92	1,317.32	1,374.72	1,423.18	1,462.19	1,509.31	1,550.19	1,602.33
C. Waste Incineration	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Memo Items:										
International Bunkers	**7.88**	**8.39**	**7.38**	**6.38**	**6.15**	**6.25**	**6.30**	**6.78**	**7.19**	**6.13**
Aviation	1.27	1.28	1.29	1.31	1.32	1.40	1.44	1.54	1.58	1.62
Marine	6.53	7.11	6.10	5.08	4.82	4.85	4.86	5.24	5.63	4.51
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (CH_4)
(Sheet 2 of 5)
(Part 2 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg					%
Total CH_4 emissions	**26,997.19**	**26,679.00**	**26,657.36**	**26,874.81**	**26,511.31**	**-9.82**
1. Energy	**10,893.53**	**10,714.78**	**10,480.17**	**10,517.44**	**10,377.30**	**-17.51**
A. Fuel Combustion (Sectoral Approach)	512.75	474.40	447.10	455.08	446.59	-25.36
1. Energy Industries	32.40	32.16	31.98	33.10	33.43	24.02
2. Manufacturing Industries and Construction	117.32	110.11	108.15	106.70	110.82	1.68
3. Transport	155.85	146.65	139.43	131.02	126.19	-41.01
4. Other Sectors	203.77	181.30	163.74	180.11	171.74	-29.83
5. Other	3.42	4.18	3.80	4.15	4.41	18.85
B. Fugitive Emissions from Fuels	10,379.78	10,240.37	10,033.07	10,062.36	9,930.61	-17.11
1. Solid Fuels	3,822.39	2,956.39	2,787.76	2,888.02	2,951.20	-29.50
2. Oil and Natural Gas	7,357.39	7,283.99	7,245.32	7,174.34	6,879.41	-10.36
2. Industrial Processes	**137.82**	**119.45**	**128.43**	**121.34**	**127.17**	**6.35**
A. Mineral Products	IE	IE	IE	IE	IE	0.00
B. Chemical Industry	80.33	68.67	72.67	72.62	77.41	36.35
C. Metal Production	57.49	50.78	47.76	48.72	49.76	-20.77
D. Other Production						
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
3. Solvent and Other Product Use						
4. Agriculture	**7,713.89**	**7,709.98**	**7,692.83**	**7,711.89**	**7,639.94**	**2.30**
A. Enteric Fermentation	5,507.09	5,459.14	5,462.73	5,481.04	5,362.36	-4.45
B. Manure Management	1,811.35	1,850.37	1,871.30	1,864.62	1,875.45	26.40
C. Rice Cultivation	356.84	365.78	325.20	328.31	360.37	6.24
D. Agricultural Soils	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
E. Prescribed Burning of Savannas	NA	NA	NA	NA	NA	0.00
F. Field Burning of Agricultural Residues	37.61	36.65	33.61	37.92	41.76	27.30
G. Other	NA	NA	NA	NA	NA	0.00
5. Land Use, Land-Use Change and Forestry	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**NA,NE**	**0.00**
A. Forest Land	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
B. Cropland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
C. Grassland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
E. Settlements	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
F. Other Land	NE	NE	NE	NE	NE	0.00
G. Other	NE	NE	NE	NE	NE	0.00
6. Waste	**8,253.95**	**8,134.82**	**8,363.93**	**8,524.14**	**8,467.80**	**-9.78**
A. Solid Waste Disposal on Land	6,618.57	6,484.23	6,658.73	6,782.47	6,708.96	-18.24
B. Waste-water Handling	1,635.37	1,650.59	1,705.19	1,741.67	1,758.84	49.03
C. Waste Incineration	NE	NE	NE	NE	NE	0.00
D. Other	NA	NA	NA	NA	NA	0.00
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**0.00**
	NA	NA	NA	NA	NA	0.00
Memo Items:						
International Bunkers	**5.65**	**5.37**	**4.40**	**4.04**	**5.02**	**-35.64**
Aviation	1.67	1.64	1.70	1.64	1.65	30.06
Marine	3.98	3.73	2.69	2.41	3.37	-48.42
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**0.00**
CO_2 Emissions from Biomass						

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (N_2O)
(Sheet 3 of 5)
(Part 1 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg									
Total N_2O emissions	**1,373.81**	**1,331.36**	**1,243.40**	**1,453.64**	**1,383.67**	**1,465.37**	**1,493.19**	**1,356.43**	**1,421.37**	**1,352.81**
1. Energy	**180.34**	**187.50**	**198.05**	**205.83**	**211.42**	**215.19**	**219.59**	**221.73**	**221.19**	**218.94**
A. Fuel Combustion (Sectoral Approach)	180.34	187.50	198.05	205.83	211.42	215.19	219.59	221.73	221.19	218.94
1. Energy Industries	24.40	24.33	24.59	25.70	25.84	25.87	27.26	28.01	28.72	28.79
2. Manufacturing Industries and Construction	12.87	12.54	13.01	13.47	13.48	13.66	14.08	14.22	13.47	13.43
3. Transport	136.21	142.94	152.68	159.38	164.91	168.35	170.80	172.89	172.86	170.45
4. Other Sectors	4.65	4.77	4.88	4.48	4.40	4.59	4.76	4.04	3.67	3.89
5. Other	3.20	2.93	2.91	2.80	2.78	2.72	2.68	2.57	2.47	2.38
B. Fugitive Emissions from Fuels	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE
1. Solid Fuels	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2. Oil and Natural Gas	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE
2. Industrial Processes	**106.59**	**105.41**	**101.14**	**105.80**	**111.73**	**119.66**	**121.77**	**101.71**	**86.68**	**82.58**
A. Mineral Products	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
B. Chemical Industry	106.59	105.41	101.14	105.80	111.73	119.66	121.77	101.71	86.68	82.58
C. Metal Production	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
3. Solvent and Other Product Use	**13.87**	**13.49**	**12.72**	**14.45**	**14.45**	**14.45**	**14.45**	**15.37**	**15.37**	**15.37**
4. Agriculture	**912.06**	**953.55**	**869.16**	**1,064.61**	**899.86**	**1,050.44**	**1,070.43**	**940.58**	**1,028.98**	**964.74**
A. Enteric Fermentation										
B. Manure Management	52.44	54.08	53.37	54.75	54.74	55.27	54.86	55.95	56.12	56.22
C. Rice Cultivation										
D. Agricultural Soils	858.41	898.30	814.46	1,008.76	843.65	993.95	1,014.11	882.18	971.38	907.09
E. Prescribed Burning of Savannas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
F. Field Burning of Agricultural Residues	1.20	1.17	1.33	1.10	1.47	1.22	1.37	1.44	1.48	1.44
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5. Land Use, Land-Use Change and Forestry	**18.31**	**18.59**	**18.82**	**19.50**	**20.32**	**19.83**	**20.64**	**20.86**	**21.88**	**21.51**
A. Forest Land	0.19	0.19	0.30	0.36	0.42	0.60	0.77	0.96	1.14	1.50
B. Cropland	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE
C. Grassland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE
E. Settlements	18.12	18.40	18.52	19.14	19.90	19.23	19.87	19.89	19.93	20.00
F. Other Land	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**41.64**	**42.81**	**43.51**	**44.24**	**45.89**	**45.70**	**46.32**	**47.17**	**48.07**	**49.66**
A. Solid Waste Disposal on Land										
B. Waste-water Handling	41.64	42.81	43.51	44.24	45.89	45.70	46.32	47.17	48.07	49.66
C. Waste Incineration	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
D. Other	IE	IE	IE	IE	IE	IE	IE	IE	IE	IE
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Memo Items:										
International Bunkers	**3.13**	**3.27**	**3.03**	**2.79**	**2.75**	**2.84**	**2.89**	**3.10**	**3.21**	**3.01**
Aviation	1.46	1.47	1.48	1.50	1.52	1.61	1.65	1.77	1.80	1.86
Marine	1.66	1.81	1.55	1.29	1.22	1.23	1.23	1.33	1.43	1.14
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSIONS TRENDS (N_2O)
(Sheet 3 of 5)
(Part 2 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg					%
Total N_2O emissions	**1,342.61**	**1,331.68**	**1,314.18**	**1,245.41**	**1,247.46**	**-2.87**
1. Energy	**207.61**	**206.22**	**197.68**	**189.91**	**183.59**	**1.46**
A. Fuel Combustion (Sectoral Approach)	207.61	206.22	197.68	189.91	183.59	1.46
1. Energy Industries	30.12	29.42	29.36	30.08	30.24	23.91
2. Manufacturing Industries and Construction	13.63	13.39	13.03	13.12	13.63	5.93
3. Transport	167.35	166.89	148.57	139.97	133.42	-2.05
4. Other Sectors	4.06	3.78	3.46	3.78	3.69	-20.82
5. Other	2.44	2.74	2.86	2.97	3.02	-5.75
B. Fugitive Emissions from Fuels	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	0.00
1. Solid Fuels	NE	NE	NE	NE	NE	0.00
2. Oil and Natural Gas	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	0.00
2. Industrial Processes	**82.67**	**67.20**	**74.54**	**73.85**	**72.13**	**-32.33**
A. Mineral Products	IE	IE	IE	IE	IE	0.00
B. Chemical Industry	82.67	67.20	74.54	73.85	72.13	-32.33
C. Metal Production	IE,NA	IE,NA	IE,NA	IE,NA	IE,NA	0.00
D. Other Production						
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
3. Solvent and Other Product Use	**15.37**	**15.37**	**15.37**	**15.37**	**15.37**	**10.83**
4. Agriculture	**956.35**	**972.50**	**955.55**	**894.00**	**902.21**	**-1.08**
A. Enteric Fermentation						
B. Manure Management	57.58	58.28	58.02	56.56	57.05	8.78
C. Rice Cultivation						
D. Agricultural Soils	897.29	912.72	896.14	836.01	843.50	-1.74
E. Prescribed Burning of Savannas	NA	NA	NA	NA	NA	0.00
F. Field Burning of Agricultural Residues	1.48	1.49	1.39	1.43	1.66	38.51
G. Other	NA	NA	NA	NA	NA	0.00
5. Land Use, Land-Use Change and Forestry	**20.56**	**20.13**	**20.61**	**21.22**	**22.06**	**20.47**
A. Forest Land	1.14	1.26	1.26	1.26	1.26	556.25
B. Cropland	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	IE,NA,NE	0.00
C. Grassland	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
D. Wetlands	NA,NE	NA,NE	NA,NE	NA,NE	NA,NE	0.00
E. Settlements	19.42	18.85	19.35	19.95	20.80	14.78
F. Other Land	NE	NE	NE	NE	NE	0.00
G. Other	NE	NE	NE	NE	NE	0.00
6. Waste	**50.05**	**50.27**	**50.43**	**51.06**	**51.69**	**24.15**
A. Solid Waste Disposal on Land						
B. Waste-water Handling	50.05	50.27	50.43	51.06	51.69	24.15
C. Waste Incineration	IE	IE	IE	IE	IE	0.00
D. Other	IE	IE	IE	IE	IE	0.00
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**0.00**
	NA	NA	NA	NA	NA	0.00
Memo Items:						
International Bunkers	**2.92**	**2.83**	**2.66**	**2.50**	**2.75**	**-11.67**
Aviation	1.92	1.88	1.96	1.88	1.90	30.06
Marine	1.01	0.95	0.68	0.61	0.86	-48.42
Multilateral Operations	**NE**	**NE**	**NE**	**NE**	**NE**	**0.00**
CO_2 Emissions from Biomass						

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF_6)
(Sheet 4 of 5)
(Part 1 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg									
Emissions of HFCs[20] - ($Gg CO_2$ equivalent)	**35,551.51**	**31,693.24**	**37,110.47**	**36,712.68**	**41,404.53**	**51,441.45**	**66,072.83**	**76,491.05**	**95,856.44**	**93,632.22**
HFC-23	3.01	2.65	3.00	2.74	2.72	2.34	2.65	2.60	3.47	2.64
HFC-32	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	0.14	0.29	0.43	0.44
HFC-41	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO
HFC-43-10mee	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
HFC-125	IE,NA,NO	IE,NA,NO	0.21	0.45	0.79	1.30	1.87	2.52	3.13	3.57
HFC-134	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
HFC-134a	IE,NA,NO	IE,NA,NO	0.49	1.75	4.62	13.63	18.48	23.56	27.06	30.90
HFC-152a	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
HFC-143	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
HFC-143a	IE,NA,NO	IE,NA,NO	IE,NA,NO	0.03	0.09	0.20	0.53	0.93	1.37	1.74
HFC-227ea	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
HFC-236fa	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	IE,NA,NO	0.01	0.06	0.14
HFC-245ca	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO	C,IE,NA,NO
Unspecified mix of listed HFCs[20] - ($Gg CO_2$ equivalent)	392.46	742.33	822.62	903.28	976.38	1,972.29	3,219.83	3,943.05	4,614.62	4,767.06
Emissions of PFCs[20] - ($Gg CO_2$ equivalent)	**20,644.70**	**17,818.50**	**16,586.86**	**16,534.65**	**15,171.39**	**15,635.82**	**16,684.49**	**15,825.08**	**14,493.78**	**14,466.27**
CF_4	2.60	2.22	2.06	2.02	1.81	1.82	1.93	1.76	1.53	1.52
C_2F_6	0.40	0.37	0.35	0.37	0.37	0.42	0.45	0.47	0.50	0.50
C_3F_8	0.00	0.00	0.00	0.00	0.00	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO
C_4F_{10}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO
c-C_4F_8	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO
C_5F_{12}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO
C_6F_{14}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO
Unspecified mix of listed PFCs[20] - ($Gg CO_2$ equivalent)	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
Emissions of SF_6[20] - ($Gg CO_2$ equivalent)	**34,564.95**	**32,548.69**	**30,632.32**	**35,096.22**	**32,404.81**	**27,749.30**	**31,329.08**	**28,748.02**	**23,840.12**	**23,438.35**
SF_6	1.45	1.38	1.28	1.47	1.36	1.16	1.31	1.20	1.00	0.98

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (HFCs, PFCs and SF_6)
(Sheet 4 of 5)
(Part 2 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg					%
Emissions of HFCs[20] - ($Gg CO_2$ equivalent)	**101,239.00**	**98,642.84**	**106,169.33**	**105,594.75**	**119,091.97**	**234.98**
HFC-23	2.57	1.71	1.71	1.08	1.36	-54.75
HFC-32	0.44	0.46	0.50	0.56	0.63	100.00
HFC-41	IE,NA,ND	IE,NA,ND	IE,NA,ND	IE,NA,ND	IE,NA,ND	0.00
HFC-43-10mee	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	0.00
HFC-125	4.01	4.39	4.79	5.26	5.82	100.00
HFC-134	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	0.00
HFC-134a	34.95	38.20	41.17	43.66	47.39	100.00
HFC-152a	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,NE,ND	0.00
HFC-143	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	0.00
HFC-143a	2.16	2.65	3.20	3.83	4.56	100.00
HFC-227ea	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	0.00
HFC-236fa	0.21	0.28	0.34	0.37	0.37	100.00
HFC-245ca	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	C,IE,NA,ND	0.00
Unspecified mix of listed HFCs[21] - ($Gg CO_2$ equivalent)	4,647.92	4,501.66	4,563.99	4,641.82	5,287.85	1,247.35
Emissions of PFCs[21] - ($Gg CO_2$ equivalent)	**13,891.62**	**7,556.96**	**8,774.61**	**7,119.14**	**6,426.97**	**-68.87**
CF_4	1.52	0.74	0.88	0.67	0.56	-78.53
C_2F_6	0.42	0.29	0.32	0.28	0.29	-27.83
C_3F_8	0.02	0.01	0.01	0.01	0.01	1,268.84
C_4F_{10}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,NA,NE,NO	0.00
c-C_4F_8	C,IE,NA,NE,NO	C,IE,NA,NE,NO	0.01	0.01	0.01	100.00
C_5F_{12}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,NA,NE,NO	0.00
C_6F_{14}	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,IE,NA,NE,NO	C,NA,NE,NO	0.00
Unspecified mix of listed PFCs[21] - ($Gg CO_2$ equivalent)	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.00
Emissions of SF_6[20] - ($Gg CO_2$ equivalent)	**19,557.46**	**18,676.05**	**17,762.52**	**17,898.55**	**17,454.45**	**-49.50**
SF_6	0.82	0.78	0.74	0.75	0.73	-49.50

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS (SUMMARY)
(Sheet 5 of 5)
(Part 1 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS EMISSIONS	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg CO_2 equivalent									
CO_2 emissions (including net CO_2 from LULUCF)[1]	4,894,881.78	4,053,321.56	4,185,890.35	4,435,337.16	4,523,813.55	4,710,402.72	4,904,878.32	4,939,596.13	4,876,134.41	4,929,347.08
CO_2 emissions (excluding net CO_2 from LULUCF)[1]	5,805,254.88	4,961,857.00	5,057,696.60	5,187,306.61	5,271,653.98	5,325,289.59	5,508,728.27	5,580,868.38	5,620,176.12	5,695,039.42
CH_4	618,063.64	618,175.60	618,840.88	606,887.16	612,386.78	608,945.43	599,002.82	588,825.41	579,475.17	568,972.00
N_2O	394,880.95	409,620.24	385,452.73	450,629.23	404,136.58	454,233.47	462,888.38	420,488.34	440,624.59	419,369.57
HFCs	35,551.51	31,893.24	37,110.47	36,712.60	41,404.53	51,441.45	66,072.83	75,491.05	95,056.44	93,632.22
PFCs	20,644.70	17,818.50	16,586.06	16,534.45	15,171.39	15,635.82	16,684.49	15,825.08	14,495.78	14,466.27
SF_6	34,564.95	32,940.69	30,632.32	35,096.22	32,404.81	27,749.30	31,329.08	28,748.02	23,840.12	23,428.35
Total (including net CO_2 from LULUCF)[2]	**5,198,587.53**	**5,163,569.83**	**5,273,712.81**	**5,581,196.83**	**5,629,317.64**	**5,868,408.20**	**6,080,855.93**	**6,068,974.03**	**6,029,624.51**	**6,049,215.49**
Total (excluding net CO_2 from LULUCF)[2,3]	**6,108,960.63**	**6,072,085.27**	**6,146,319.06**	**6,333,166.27**	**6,377,158.07**	**6,483,395.07**	**6,686,705.88**	**6,710,246.28**	**6,773,666.22**	**6,814,907.83**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1990)	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Gg CO_2 equivalent									
1. Energy	5,148,310.53	5,115,596.96	5,212,562.19	5,335,403.07	5,415,571.48	5,466,523.41	5,655,753.34	5,716,343.59	5,752,269.19	5,822,264.53
2. Industrial Processes	301,106.47	281,597.15	281,481.18	284,150.97	294,071.53	305,874.25	321,516.51	327,448.97	335,054.48	327,471.02
3. Solvent and Other Product Use	4,300.25	4,188.79	3,941.89	4,479.42	4,479.42	4,479.42	4,479.42	4,766.04	4,766.04	4,766.04
4. Agriculture	439,568.46	453,509.06	429,487.72	489,526.15	443,456.07	492,994.78	496,789.12	457,325.58	483,223.40	463,084.25
5. Land Use, Land-Use Change and Forestry[3]	-904,695.77	-902,752.80	-866,772.51	-745,933.21	-741,541.75	-608,739.52	-597,452.85	-634,806.29	-737,507.47	-759,025.40
6. Waste	208,997.59	211,438.67	213,012.35	213,760.43	213,280.89	207,275.86	203,770.39	197,896.14	191,818.87	190,655.07
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)[2]	**5,198,587.53**	**5,163,569.83**	**5,273,712.81**	**5,581,196.83**	**5,629,317.64**	**5,868,408.20**	**6,080,855.93**	**6,068,974.03**	**6,029,624.51**	**6,049,215.49**

TABLE 10 EMISSION TRENDS (SUMMARY)
(Sheet 5 of 5)
(Part 2 of 2)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS EMISSIONS	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg CO_2 equivalent					(%)
CO_2 emissions including net CO_2 from LULUCF[1]	5,104,958.23	5,027,264.79	5,047,258.39	5,102,829.71	5,207,890.25	27.18
CO_2 emissions excluding net CO_2 from LULUCF[1]	5,864,464.88	5,795,192.22	5,815,888.98	5,877,677.37	5,987,984.41	19.63
CH_4	566,940.92	560,258.94	559,804.46	564,371.10	556,737.49	-9.92
N_2O	416,207.67	412,838.33	407,398.81	386,076.78	388,713.91	-2.07
HFCs	101,239.00	98,642.84	106,169.33	105,994.75	119,091.97	254.98
PFCs	13,892.62	7,536.96	8,774.61	7,119.14	6,426.97	-68.87
SF_6	19,557.46	18,676.05	17,762.52	17,808.53	17,454.45	-49.50
Total (including net CO_2 from LULUCF)[2]	**6,222,795.90**	**6,125,139.91**	**6,147,158.12**	**6,184,290.01**	**6,294,315.04**	**21.08**
Total (excluding net CO_2 from LULUCF)[2, 6]	**6,982,302.55**	**6,893,127.35**	**6,915,796.70**	**6,959,137.68**	**7,074,409.20**	**15.80**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2000	2001	2002	2003	2004	Change from base to latest reported year
	Gg CO_2 equivalent					(%)
1. Energy	5,994,287.86	5,931,601.78	5,944,647.79	6,009,767.97	6,108,192.96	18.64
2. Industrial Processes	329,589.05	300,725.53	310,949.28	304,102.08	320,656.33	6.49
3. Solvent and Other Product Use	4,766.04	4,766.04	4,766.04	4,766.04	4,766.04	10.85
4. Agriculture	458,458.85	463,383.11	457,769.00	439,089.67	440,124.56	0.13
5. Land Use, Land-Use Change and Forestry[7]	-753,132.79	-761,750.57	-762,249.18	-768,270.68	-775,254.52	-14.55
6. Waste	188,846.89	186,414.02	191,275.18	194,834.93	193,831.69	-7.70
7. Other	NA	NA	NA	NA	NA	0.00
Total (including LULUCF)[7]	**6,222,795.90**	**6,125,139.91**	**6,147,158.12**	**6,184,290.01**	**6,294,315.04**	**21.08**

[1] The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For those Parties, this different base year is used to calculate the percentage change in the final column of this table.

[2] Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[3] The information in these rows is requested to facilitate comparison of data, because Parties differ in the way they report CO_2 emissions and removals from LULUCF.

[4] Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this should be provided in the documentation box. Only in these rows are the emissions expressed as CO_2 equivalent emissions.

[5] In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e., mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO_2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

[6] These totals will differ from the totals reported in table Summary 2 if Parties report non-CO_2 emissions from LULUCF.

[7] Includes net CO_2, CH_4 and N_2O from LULUCF.

Documentation box:
- Parties should provide detailed explanations on emissions trends in Chapter 2: Trends in Greenhouse Gas Emissions and, as appropriate, in the corresponding Chapters 3 - 9 of the NIR. Use this documentation box to provide references to relevant sections.
- Use the documentation box to provide explanations if potential emissions are reported.

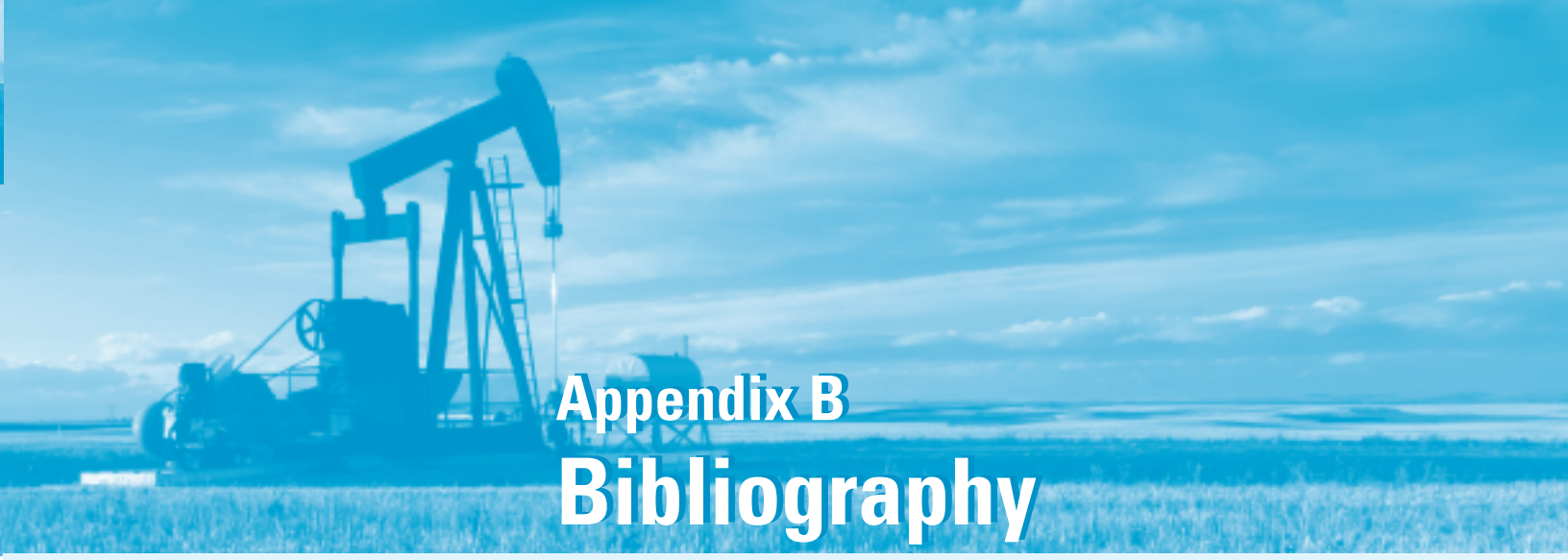
SUMMARY 2 SUMMARY REPORT FOR CO_2 EQUIVALENT EMISSIONS
(Sheet 1 of 1)

Inventory 2004
Submission 2006 v1.1
UNITED STATES OF AMERICA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 [1]	CH_4	N_2O	HFCs [2]	PFCs [2]	SF_6 [2]	Total
	Gg CO_2 equivalent						
Total (Net Emissions) [3]	**5,207,890.25**	**556,737.49**	**386,713.91**	**119,091.97**	**6,426.97**	**17,454.45**	**6,294,315.04**
1. Energy	**5,835,334.67**	**215,821.24**	**57,037.05**				**6,108,192.96**
A. Fuel Combustion (Sectoral Approach)	5,829,300.81	9,378.42	57,037.05				5,895,716.28
1. Energy Industries	2,290,619.61	702.00	9,374.38				2,300,695.98
2. Manufacturing Industries and Construction	863,461.40	2,327.16	4,224.98				870,013.53
3. Transport	1,825,631.34	2,650.01	41,359.18				1,869,640.54
4. Other Sectors	595,585.26	3,606.62	1,142.48				600,334.36
5. Other	254,003.20	92.64	936.03				255,031.87
B. Fugitive Emissions from Fuels	6,033.86	206,442.82	IE,NA,NE				212,476.67
1. Solid Fuels	NE	61,975.27	NE				61,975.27
2. Oil and Natural Gas	6,033.86	144,467.54	IE,NA,NE				150,501.40
2. Industrial Processes	**152,649.54**	**2,670.47**	**22,268.73**	**119,091.97**	**6,426.97**	**17,454.45**	**320,654.33**
A. Mineral Products	70,163.13	IE	IE				70,163.13
B. Chemical Industry	24,758.35	1,625.59	22,360.73	IE,NA	IE,NA	IE,NA	48,744.67
C. Metal Production	57,728.26	1,044.88	IE,NA	IE,NA	2,848.15	2,704.95	64,326.24
D. Other Production	NE						NE
E. Production of Halocarbons and SF_6				15,600.73	NA,NE	NA,NE	15,600.73
F. Consumption of Halocarbons and SF_6 [2]				103,491.24	3,578.82	14,749.50	121,819.56
G. Other	NA,NO	NA,NO	NA,NO	NA	NA	NA	NA,NO
3. Solvent and Other Product Use	**NA,NE**		**4,766.04**				**4,766.04**
4. Agriculture		**160,438.74**	**279,685.80**				**440,124.54**
A. Enteric Fermentation		112,609.58					112,609.58
B. Manure Management		39,584.41	17,684.43				57,068.84
C. Rice Cultivation		7,567.75					7,567.75
D. Agricultural Soils [3]		NA,NE	261,486.40				261,486.40
E. Prescribed Burning of Savannas		NA	NA				NA
F. Field Burning of Agricultural Residues		877.00	514.97				1,391.97
G. Other		NA	NA				NA
5. Land Use, Land-Use Change and Forestry [4]	**-780,094.17**	**NA,NE**	**6,839.65**				**-773,254.52**
A. Forest Land	-420,195.58	NA,NE	391.87				-419,803.71
B. Cropland	-31,759.51	NA,NE	IE,NA,NE				-31,759.51
C. Grassland	-13,859.92	NA,NE	NA,NE				-13,859.92
D. Wetlands	NA,NE	NA,NE	NA,NE				NA,NE
E. Settlements	-97,511.28	NA,NE	6,447.77				-90,863.51
F. Other Land	NE	NE	NE				NE
G. Other		NE	NE				-216,967.86
6. Waste	**IE,NA**	**177,807.05**	**16,024.64**				**193,831.69**
A. Solid Waste Disposal on Land	NA	140,888.15					140,888.15
B. Waste-water Handling		36,918.90	16,024.64				52,943.54
C. Waste Incineration	IE	NE	IE				IE,NE
D. Other	NA	NA	IE				IE,NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Memo Items: [4]							
International Bunkers	94,408.89	105.40	853.72				95,458.00
Aviation	59,911.60	34.69	588.63				60,534.92
Marine	34,587.29	70.71	265.09				34,923.08
Multilateral Operations	**NE**	**NE**	**NE**				**NE**
CO_2 Emissions from Biomass	**211,229.93**						**211,229.93**

Total CO_2 Equivalent Emissions without Land Use, Land-Use Change and Forestry [5]	7,067,569.56
Total CO_2 Equivalent Emissions with Land Use, Land-Use Change and Forestry [5]	6,294,315.04

[1] For CO_2 from Land Use, Land-use Change and Forestry the net emissions/removals are to be reported. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).
[2] Actual emissions should be included in the national totals. If no actual emissions were reported, potential emissions should be included.
[3] Parties which previously reported CO_2 from soils in the Agriculture sector should note this in the NIR.
[4] See footnote 8 to table Summary 1.A.
[5] These totals will differ from the totals reported in table 10, sheet 3 if Parties report non-CO_2 emissions from LULUCF.



Appendix B
Bibliography

AC and IASC 2004—Arctic Council and the International Arctic Science Committee. *Impacts of a Warming Arctic: Arctic Climate Impact Assessment. ACIA Overview Report.* New York, NY: Cambridge University Press, 2004. <http://www.acia.uaf.edu/>

Barker et al. 2003—Barker, C.M., W.K. Reisen, and V.L. Kramer. "California State Mosquito-Borne Virus Surveillance and Response Plan: A Retrospective Evaluation Using Conditional Simulations." *American Journal of Tropical Medicine and Hygiene* 68(5):508-18. <http://www.ajtmh.org/cgi/content/abstract/68/5/508>

Brown et al. 2003—Brown, T.J., A. Barnston, J.O. Roads, R. Martin, and K.E. Wolter. "2003 Seasonal Consensus Climate Forecasts for Wildland Fire Management." *Experimental Long-Lead Forecasts Bulletin* 12(1). <www.cefa.dri.edu/Publications/cefareport03-01.pdf>

CCSP 2002—U.S. Climate Change Science Program. *Strategic Plan for the Climate Change Science Program: Review Draft.* Washington, DC: CCSP, November 2002. Updated October 11, 2003. <http://www.climatescience.gov/Library/stratplan2003/draft/toc.htm>

CCSP 2005—U.S. Climate Change Science Program. *Climate Science in Support of Decision Making: Workshop Report.* November 14-16, 2005, Arlington, VA. Updated June 20, 2006. <http://www.climatescience.gov/workshop2005/default.htm>

CCSP and SGCR 2003a—U.S. Climate Change Science Program and Subcommittee on Global Change Research. *Strategic Plan for the U.S. Climate Change Science Program: A Report by the Climate Change Science Program and the Subcommittee on Global Change Research.* Washington, DC: July 2003. Updated May 19, 2004. < http://www.climatescience.gov/Library/stratplan2003/final/default.htm>

CCSP and SGCR 2003b—U.S. Climate Change Science Program and Subcommittee on Global Change Research. *The U.S. Climate Change Science Program: Vision for the Program and Highlights of the Scientific Strategic Plan.* Washington, DC: July 24, 2003. Updated April 20, 2004. <http://www.climatescience.gov/Library/stratplan2003/vision/default.htm>

CCSP and SGCR 2006a—U.S. Climate Change Science Program and Subcommittee on Global Change Research. *Our Changing Planet: The U.S. Climate Change Science Program for Fiscal Year 2007. A Supplement to the President's Budget for Fiscal Year 2007.* Posted December 15, 2006. <http://www.climatescience.gov/>

CCSP and SGCR 2006b—U.S. Climate Change Science Program and Subcommittee on Global Change Research. *Temperature Trends in the Lower Atmosphere: Steps for Understanding and Reconciling Differences.* Synthesis and Assessment Product 1.1. Ed. T.R. Karl, S.J. Hassol, C.D. Miller, and W.L. Murray. Washington, DC: April 2006. <http://www.climatescience.gov/Library/sap/sap1-1/finalreport/default.htm>

CCTP 2003—U.S. Climate Change Technology Program. *Research and Current Activities.* DOE/PI-0001. Washington, DC: U.S. Department of Energy, November 2003. <http://www.climatetechnology.gov/library/2003/currentactivities/index.htm>

CCTP 2005a—U.S. Climate Change Technology Program. *Technology Options for the Near and Long Term.* August 2005. <http://www.climatetechnology.gov/library/2005/tech-options/tor2005-51-56.pdf>

CCTP 2005b—U.S. Climate Change Technology Program. *Vision and Framework for Strategy and Planning.* DOE/PI-0003. Washington, DC: U.S. Department of Energy, August 2005. <http://www.climatetechnology.gov/vision2005/index.htm>

CCTP 2006—U.S. Climate Change Technology Program. *U.S. Climate Change Technology Program: Strategic Plan.* DOE/PI-0005. Washington, DC: September 2006. <http://www.climatetechnology.gov/stratplan/final/index.htm>

CEA 2006—Council of Economic Advisors. *Economic Report of the President.* Washington, DC: U.S. Government Printing Office. <http://www.whitehouse.gov/cea/erp06.pdf>

CEPA 2006—California Environmental Protection Agency. *Climate Action Team Report to Governor Swarzenegger and the Legislature.* Sacramento, CA: March 2006. <http://www.climatechange.ca.gov/climate_action_team/reports/index.html>

CTIC 2004—Conservation Technology Information Center. *National Crop Residue Management Survey 2004.* "Conservation Tillage and Other Tillage Types in the United States: 1990–2004." <http://www.conservationinformation.org/index.asp?site=1&action=crm_results>

Franco and Sanstad 2006—Franco, G., and A. Sanstad. *Climate Change and Electricity Demand in California.* Final white paper. CEC-500-2005-201-SF. Berkeley, CA: California Climate Change Center, February 2006. <www.energy.ca.gov/2005publications/CEC-500-2005-201/CEC-500-2005-201-SF.PDF>

GEO 2005—Group on Earth Observations. *The Global Earth Observation System of Systems (GEOSS) 10-Year Implementation Plan.* February 2005. <earthobservations.org/docs/ 10-Year%20Implementation%20Plan.pdf>

Goklany 1995—Goklany, I.M. "Strategies to Enhance Adaptability: Technological Change, Sustainable Growth and Free Trade." *Climatic Change* 30(4):427-49. <www.springerlink.com/index/XXU1188X5KK852U6.pdf>

Goklany 1998—Goklany, I.M. "Saving Habitat and Conserving Biodiversity on a Crowded Planet." *BioScience* 48:941-53. <http://members.cox.net/igoklany/Golany%201995%20Climatic%20Change.pdf>

Goklany 2007—Goklany, I.M. "Integrated Strategies to Reduce Vulnerability and Advance Adaptation, Mitigation, and Sustainable Development." *Mitigation and Adaptation Strategies for Global Change* (in press). <www.hm-treasury.gov.uk/media/26C/23/Goklany-Integrating_A&M_preprint.pdf>

Groisman et al. 2004—Groisman, P.Y., R.W. Knight, T.R. Karl, D.R. Easterling, B. Sun, and J.H. Lawrimore. "Contemporary Changes of the Hydrological Cycle over the Contiguous United States: Trends Derived from In Situ Observations." *Journal of Hydrometeorology* 5(1):64-85. <http://ams.allenpress.com/perlserv/?request=get-archive&issn=1525-7541&volume=5>

Hadley et al. 2006—Hadley, S.W., D.J. Erickson III, J.L. Hernandez, C.T. Broniak, and T.J. Blasing. "Responses of Energy Use to Climate Change: A Climate Modeling Study." *Geophysical Research Letters* 33, L17703, doi:10.1029/2006GL026652. <http://www.agu.org/pubs/crossref/2006/2006GL026652.shtml>

Hess et al. 2004—Hess, K.W., S.A. White, J. Sellars, E.A. Spargo, A. Wong, S.K. Gill, and C. Zervas. *North Carolina Sea Level Rise Project: Interim Technical Report.* NOAA Technical Memorandum NOS CS 5. Silver Spring, MD: National Oceanic and Atmospheric Administration, National Ocean Service, Coast Survey Development Laboratory, September 2004.

Hodgkins et al. 2003—Hodgkins, G.A., R.W. Dudley, and T.G. Huntington. "Changes in the Timing of High River Flows in New England over the 20th Century. *Journal of Hydrology* 278(1-4):244-52. <water.usgs.gov/osw/Hodgkins.et.al.Q-Timing.pdf>

Hoerling and Kumar 2003—Hoerling, M., and A. Kumar. "The Perfect Ocean for Drought." *Science* 299(5607):691-94. <www.sciencemag.org/cgi/content/full/299/5607/691>

Hofmann 2004—Hofmann, David. *Long-lived Greenhouse Gas Annual Averages for 1979–2004.* Boulder, CO: National Oceanic and Atmospheric Administration, Earth Systems Research Laboratory, Global Monitoring Division. <http://www.blackwellsynergy.com/doi/ abs/10.1111/j.1600-0889.2006.00201.x>

Höppe and Pielke 2006—Höppe, P., and R. Pielke, Jr., eds. *Workshop on Climate Change and Disaster Losses: Understanding and Attributing Trends and Projections.* Hohenkammer, Germany: May 25-26, 2006. <http://sciencepolicy.colorado.edu/sparc/research/projects/extreme_events/munich_workshop/index.htm>

Hoyos et al. 2006—Hoyos, C.D., P. Agudelo, P. Webster, and J. Curry. "Deconvolution of the Factors Leading to the Increase in Global Hurricane Intensity." *Science* 312(94). <www.sciencemag.org/cgi/content/abstract/1123560v1>

IPCC 1996a—Intergovernmental Panel on Climate Change. *Climate Change* 1995: *The Science of Climate Change. Contribution of Working Group I to the Second Assessment of the Intergovernmental Panel on Climate Change.* Ed. J.T. Houghton, L.G. Meira Filho, B.A. Callender, N. Harris, A. Kattenberg, and K. Maskell. Cambridge, UK: Cambridge University Press. <www.ipcc.ch/pub/reports.htm>

IPCC 1996b—Intergovernmental Panel on Climate Change. *IPCC Second Assessment—Climate Change 1995.* A Report of the Intergovernmental Panel on Climate Change. Geneva, Switzerland: United Nations Environment Programme, World Meteorological Organization, IPCC. <http://www.ipcc.ch/pub/sa(E).pdf>

IPCC 2000—Intergovernmental Panel on Climate Change. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.* IPCCXVI/Doc. 10 (1.IV.2000). Montreal, Canada: IPCC, National Greenhouse Gas Inventories Programme, May 2000. <www.ipcc-nggip.iges.or.jp/public/gp/english/>

IPCC 2001a—Intergovernmental Panel on Climate Change. *Climate Change 2001: The Scientific Basis.* Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Ed. J.T. Houghton, Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson. Cambridge, England, and New York, NY: Cambridge University Press. <http://www.grida.no/climate/ipcc_tar/>

IPCC 2001b—Intergovernmental Panel on Climate Change. *Climate Change 2001: Impacts, Adaptation, and Vulnerability.* Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Ed. J.J. McCarthy, O.F. Canziani, N.A. Leary, D.J. Dokken, and K.S. White. Cambridge, England, and New York, NY: Cambridge University Press. <www.grida.no/climate/ipcc_tar/wg2/index.htm>

IPCC 2003—Intergovernmental Panel on Climate Change, National Greenhouse Gas Inventories Programme. *Good Practice Guidance for Land Use, Land-Use Change, and Forestry.* Ed. J. Penman et al. Kanagawa, Japan: Institute for Global Environmental Strategies, 2003. Accessed August 13, 2004. <http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.htm>

IPCC/UNEP/OECD/IEA 1997—Intergovernmental Panel on Climate Change, United Nations Environment Programme, Organisation for Economic Co-operation and Development, International Energy Agency. *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories.* Paris, France. <http://www.ipcc-nggip.iges.or.jp/public/gl/invs1.htm>

IWGEO and NSTC/CENR 2005—Interagency Working Group on Earth Observations and National Science and Technology Council, Committee on Environment and Natural Resources. *Strategic Plan for the U.S. Integrated Earth Observation System*. Washington, DC. <usgeo.gov/docs/EOCStrategic_Plan.pdf>

Kossin et al. 2007—Kossin, J.P., K.R. Knapp, D.J. Vimont, R.J. Murnane, and B.A. Harper. "A Globally Consistent Reanalysis of Hurricane Variability and Trends." *Geophysical Research Letters* 34, L04815, doi:10.1029/2006GL028836. <http://www.agu.org/pubs/crossref/2007/2006GL028836.shtml>

Landsea et al. 2006—Landsea, C.W., B.A. Harper, K. Hoarau, and J.A. Knaff. "Can We Detect Trends in Extreme Tropical Cyclones?" *Science* 313(5786):452-54. <www.sciencemag.org/cgi/content/full/313/5786/452>

Lubowski et al. 2006—Lubowski, R.N, M. Vesterby, S. Bucholtz, A. Baez, and M.J. Roberts. *Major Uses of Land in the United States, 2002*. Economic Information Bulletin No. EIB-14. Washington, DC: U.S. Department of Agriculture, Economic Research Service, May 2006. <http://www.ers.usda.gov/publications/EIB14/>

Lucier et al. 2006—A. Lucier, M. Palmer, H. Mooney, K. Nadelhoffer, D. Ojima, and F. Chavez. *Ecosystems and Climate Change: Research Priorities for the U.S. Climate Change Science Program. Recommendations from the Scientific Community*. Report on an Ecosystems Workshop, prepared for the Ecosystems Interagency Working Group. Special Series No. SS-92-06. Solomons Island, MD: University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory. <http://www.usgcrp.gov/usgcrp/Library/ecosystems/>

Marland et al. 2005—Marland, G., T.A. Boden, and R.J. Andres. "Global, Regional, and National CO_2 Emissions." In *Trends: A Compendium of Data on Global Change*. Oak Ridge, TN: U.S. Department of Energy, Oak Ridge National Laboratory, Carbon Dioxide Information Analysis Center. <http://cdiac.ornl.gov/trends/emis/em_cont.htm>

McCarty 2001—McCarty, J.P. "Ecological Consequences of Recent Climate Change." *Conservation Biology* 15(2): 320-31. <http://oaspub.epa.gov/eims/xmlreport.display?deid=20426&z_chk=829&format=print>

Mills 2005—Mills, E. "Insurance in a Climate of Change." *Science* 309(5737):1040-44, doi:10.1126/science.1112121, LBNL-57943. <http://www.sciencemag.org/cgi/content/full/309/5737/1040>

Mote 2003—Mote, P.W. "Trends in Snow Water Equivalent in the Pacific Northwest and Their Climatic Causes." *Geophysical Research Letters* 30(12):1601, doi:10.1029/2003GL017258. <http:// www.agu.org/pubs/crossref/2003/2003GL017258.shtml>

Mote et al. 2005—Mote, P.W., A.F. Hamlet, M.P. Clark, and D.P. Lettenmaier. "Declining Mountain Snowpack in Western North America." *Bulletin of the American Meteorological Society* 86(1):39-49. <http://ams.allenpress.com/perlserv/?request=get-abstract&doi=10.1175%2FBAMS-86-1-39>

NAST 2000—National Assessment Synthesis Team. *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*. Report for the U.S. Global Change Research Program. Cambridge, England: Cambridge University Press. <http://www.usgcrp.gov/usgcrp/Library/nationalassessment/overview.htm>

NEG/ECP 2001—Conference of New England Governors and Eastern Canadian Premiers. *Climate Change Action Plan 2001*. Prepared by the Committee on the Environment and the Northeast International Committee on Energy of the Conference of New England Governors and Eastern Canadian Premiers. August 28, 2001. <www.negc.org/documents/NEG-ECP%20CCAP.PDF>

NRC 2001—National Research Council. *Climate Change Science: An Analysis of Some Key Questions*. Washington, DC: National Academy Press. <http://books.nap.edu/openbook.php?isbn=0309075742>

NRC 2004—National Research Council. *Implementing Climate and Global Change Research: A Review of the Final U.S. Climate Change Science Program Strategic Plan*. Washington, DC: The National Academies Press. <http://www.nap.edu>

OMB 2006—Office of Management and Budget. *Fiscal Year 2007 Report to Congress on Federal Climate Change Expenditures.* Washington, DC: April 2006. <http://www.whitehouse.gov/omb/legislative/fy07_climate_change.pdf>

Parmesan and Yohe 2003—Parmesan, C., and G. Yohe. "A Globally Coherent Fingerprint of Climate Impacts Across Natural Systems." *Nature* 421:37-42, doi:1038/nature01286. <http://www.nature.com/nature/journal/v421/n6918/abs/nature01286.html>

Patz et al. 2000—Patz, J.A., M.A. McGeehin, S.M. Bernard, K.L. Ebi, P.R. Epstein, A. Grambsch, D.J. Gubler, P. Reiter, I. Romieu, J.B. Rose, J.M. Samet, and J. Trtanj. "Potential Consequences of Climate Variability and Change for Human Health in the United States." In *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change.* Report for the U.S. Global Change Research Program. Ed. National Assessment Synthesis Team. Cambridge, England: Cambridge University Press, pp. 437–58. <http://www.usgcrp.gov/usgcrp/Library/nationalassessment/overview.htm>

Peart et al. 1995—Peart, R.M., R.B. Curry, C. Rosenzweig, J.W. Jones, K.J. Boote, and L.H. Allen, Jr. "Energy and Irrigation in South Eastern U.S. Agriculture Under Climate Change." *Journal of Biogeography* 22(4/5):635-42, doi:10.2307/2845964. <http://links.jstor.org/sici?sici=0305-0270(199507%2F09)22%3A4%2F5%3C635%3AEAIISE%3E2.0.CO%3B2-9>

Pulwarty et al. 2005—Pulwarty, R.S., K.L. Jacobs, and R.M. Dole. "The Hardest Working River: Drought and Critical Water Problems in the Colorado River Basin." In *Drought and Water Crises: Science, Technology, and Management Issues.* Ed. D.A. Wilhite. CRC Press. <http://www.cdc.noaa.gov/pubs/2005/>

Reinbold et al. 2004—Reinbold, H.J., J.O. Roads, and T.J. Brown. "Evaluation of ECPC's Fire Danger Forecasts Using RAWS Observations." *International Journal of Wildland Fire* 14:19-36. <www.publish.csiro.au/?act=view_file&file_id=WF03052.pdf>

Roads et al. 2005—Roads, J., F. Fujioka, S. Chen, and R. Burgan. "Seasonal Fire Danger Forecasts for the US." *International Journal of Wildland Fire* 14(1). <ecpc.ucsd.edu/ncepfd/roadsetal2005.pdf>

Rose et al. 2001—Rose, J.B., P.R. Epstein, E.K. Lipp, B.H. Sherman, S.M. Bernard, and J.A. Patz. "Climate Variability and Change in the United States: Potential Impacts on Water- and Foodborne Diseases Caused by Microbiologic Agents." *Environmental Health Perspectives* 109(suppl 2):211–21. <www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1240668>

Rosenzweig et al. 2007—Rosenzweig, C., D.C. Major, K. Demong, R. Horton, C. Stanton, and M. Stults. "Managing Climate Change Risks in New York City's Water System: Assessment and Adaptation Planning." *Mitigation and Adaptation Strategies for Global Change.* In press.

Scheffer et al. 2001—Scheffer, M., S. Carpenter, J.A. Foley, C. Folke, and B. Walker. "Catastrophic Shifts in Ecosystems." *Nature* 413:591-96, doi:10.1038/35098000. <http://www.nature.com/nature/journal/v413/n6856/abs/413591a0.html>

Scott et al. 2005—Scott, M.J., J.A. Dirks, and K.A. Cort. "The Adaptive Value of Energy Efficiency Programs in a Warmer World: Building Energy Efficiency Offsets Effects of Climate Change." In *Reducing Uncertainty Through Evaluation: Proceedings of the 2005 International Energy Program Evaluation Conference.* PNNL-SA-45118. Brooklyn, NY: August 17-19, 2005. <http://www.iepec.org/IEPECHome.htm?programsabstracts.htm>

Smith et al. 2004—Smith, W.B., P.D. Miles, J.S. Vissage, and S.A. Pugh. *Forest Resources of the United States*, 2002. Gen. Tech. Rep. NC-241. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station, April 2004. <http://ncrs2.fs.fed.us/4801/fiadb/rpa_tabler/gtr_nc241.pdf>

Stone et al. 2002—Stone, R.S., E.G. Dutton, J.M. Harris, and D. Longnecker. "Earlier Spring Snowmelt in Northern Alaska as an Indicator of Climate Change." *Journal of Geophysical Research* 107(D10):4089, doi:10.1029/2000JD000286. <http://www.agu.org/pubs/crossref/2002/2000JD000286.shtml>

Tompkins and Adger 2004—Tompkins, E.L., and W.N. Adger. "Does Adaptive Management of Natural Resources Enhance Resilience to Climate Change?" *Ecology and Society* 9 (2):10. <http://www.ecologyandsociety.org/vol9/iss2/art10/>

Triggs et al. 2004—Triggs, J.M., B.A. Kimball, P.J. Pinter, Jr., G.W. Wall, M.M. Conley, T.J. Brooks, R.L. LaMorte, N.R. Adam, M.J. Ottman, A.D. Matthias, S.W. Leavitt, and R.S. Cerveny. "Free-Air CO_2 Enrichment Effects on the Energy Balance and Evapotranspiration of Sorghum." *Agricultural and Forest Meteorology* 124(2):63-79.

Turner et al. 2003—Turner, B.L.I., R.E. Kasperson, P.A. Matson, J.J. McCarthy, R.W. Corell, L. Christensen, N. Eckley, J.X. Kasperson, A. Luers, M.L. Martello, C. Polsky, A. Pulsipher, and A. Schiller. "A Framework for Vulnerability Analysis in Sustainability Science." *Proceedings of the National Academy of Sciences* 100(14):8074-79. <yaquivalley.stanford.edu/pdf/turner_matson_2003.pdf>

UNFCCC 2003—United Nations Framework Convention on Climate Change. *National Communications: Greenhouse Gas Inventories from Parties Included in Annex I to the Convention, UNFCCC Guidelines on Reporting and Review*. Conference of the Parties, Eighth Session. FCCC/CP/2002/8. New Delhi, India: March 28, 2003. <http://unfccc.int/resource/docs/cop8/08.pdf>

U.S. DOC/BEA 2006a—U.S. Department of Commerce, Bureau of Economic Analysis. *Current-Dollar and "Real" Gross Domestic Product*. Washington, DC. Updated June 29, 2006. Accessed June 30, 2006. <http://www.bea.gov/bea/dn/gdplev.xls>

U.S. DOC/BEA 2006b—U.S. Department of Commerce, Bureau of Economic Analysis. *Industry Economic Accounts*, Gross-Domestic-Product-by-Industry Accounts, "Value Added by Industry as a Percentage of Gross Domestic Product." <http://www.bea.gov/bea/industry/gpotables/gpo_action.cfm>

U.S. DOC/Census 1999—U.S. Department of Commerce, Bureau of the Census, Housing and Household Economic Statistics Division. *American Housing Survey for the United States: 1997*. Current Housing Reports, Series H-150-97. <http://www.census.gov/hhes/www/housing/ahs/nationaldata.html>

U.S. DOC/Census 2004—U.S. Department of Commerce, Bureau of the Census, Housing and Household Economic Statistics Division. *American Housing Survey for the United States: 2003*. Current Housing Reports, Series H-150-03. <http://www.census.gov/hhes/www/housing/ahs/nationaldata.html>

U.S. DOC/Census 2005—U.S. Department of Commerce, Bureau of the Census. U.S. Census Bureau International Database (IDB). Updated April 26, 2005. Accessed August 15, 2005. <http://www.census.gov/ipc/www/idbnew.html>

U.S. DOC/Census 2006a—U.S. Department of Commerce, Bureau of the Census, Population Division. *Population Estimates*. Table 1: Annual Estimates of the Population for the United States and States, and for Puerto Rico: April 1, 2000, to July 1, 2005. <http://www.census.gov/popest/states/tables/NST-EST2005-01.xls>

U.S. DOC/Census 2006b—U.S. Department of Commerce, Bureau of the Census, Population Division. *Population Estimates*. Table 4: Cumulative Estimates of the Components of Population Change for the United States and States: April 1, 2000, to July 1, 2005. <http://www.census.gov/popest/states/tables/NST-EST2005-04.xls>

U.S. DOC/Census 2006c—U.S. Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States: 2006*. 125th edition. Tables No. 17 and 26. Washington, DC: U.S. Government Printing Office. <http://www.census.gov/prod/2005pubs/06statab/pop.pdf>

U.S. DOC/NOAA 2001—U.S. Department of Commerce, National Oceanic and Atmospheric Administration. *The United States Detailed National Report on Systematic Observations for Climate: United States Global Climate Observing System Program*. Submitted to the Conference of the Parties to the United Nations Framework Convention on Climate Change. Silver Spring, MD: 2001. <http://www.ncdc.noaa.gov/oa/usgcos/documents/soc_long.pdf>

U.S. DOC/NOAA 2004—U.S. Department of Commerce, National Oceanic and Atmospheric Administration. *Population Trends Along the Coastal United States: 1980-2008.* Silver Spring, MD: September 2004. <http://www.oceanservice.noaa.gov/programs/mb/supp_cstl_population.html>

U.S. DOE 2006a—U.S. Department of Energy, Energy Efficiency and Renewable Energy, Federal Energy Management Program. *Annual Report to Congress on Federal Government Energy Management and Conservation Programs: Fiscal Year 2004.* Washington, DC. <http://www1.eere.energy.gov/femp/pdfs/annrep04.pdf>

U.S. DOE 2006b—U.S. Department of Energy. *Report on Federal Agency Activities Under Executive Order 13123, Efficient Energy Management: Fiscal Year 2004.* Washington, DC.

U.S.DOE/EIA 2003—U.S. Department of Energy, Energy Information Administration. *2003 Commercial Buildings Energy Consumption Survey—Overview of Commercial Buildings Characteristics.* <http://www.eia.doe.gov/emeu/cbecs/cbecs2003/introduction.html>

U.S. DOE/EIA 2004a—U.S. Department of Energy, Energy Information Administration. *Monthly Energy Review July 2004* and unpublished Supplemental Tables on Petroleum Product detail. DOE/EIA-0035(2004/07). Washington, DC. <http://tonto.eia.doe.gov/FTPROOT/monthlyhistory.htm>

U.S. DOE/EIA 2004b—U.S. Department of Energy, Energy Information Administration. *U.S. Forward-Cost Uranium Reserves by State, December 31, 2003.* <http://www.eia.doe.gov/cneaf/nuclear/page/reserves/ures.html>

U.S. DOE/EIA 2005a—U.S. Department of Energy, Energy Information Administration. *2005 Domestic Uranium Production Report.* <http://www.eia.doe.gov/fuelnuclear.html>

U.S. DOE/EIA 2005b—U.S. Department of Energy, Energy Information Administration. *Annual Energy Outlook 2005.* Washington, DC: February 2005. <http://www.eia.doe.gov/oiaf/archive/aeo05/pdf/0383(2005).pdf>

U.S. DOE/EIA 2005c—U.S. Department of Energy, Energy Information Administration. *Electric Power Annual.* Washington, DC. <http://www.eia.doe.gov/cneaf/electricity/epa/epates.html>

U.S.DOE/EIA 2005d—U.S. Department of Energy, Energy Information Administration. *Emissions of Greenhouse Gases in the United States 2004.* DOE/EIA-0573(2004). Washington, DC: U.S. DOE, December 2005. <http://www.eia.doe.gov/oiaf/1605/gg05rpt/index.html>

U.S. DOE/EIA 2005e—U.S. Department of Energy, Energy Information Administration. *Petroleum Supply Annual 2004*, Volume 1. Washington, DC. <http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_supply_annual/ psa_volume1/historical/2004/psa_volume1_2004.html>

U.S. DOE/EIA 2006a—U.S. Department of Energy, Energy Information Administration. *Annual Energy Outlook 2006 With Projections to 2036.* DOE/EIA-0383(2006). Washington, DC: February 2006. <http://www.eia.doe.gov/oiaf/aeo/pdf/0383(2006).pdf>

U.S. DOE/EIA 2006b—U.S. Department of Energy, Energy Information Administration. *Annual Energy Review 2005.* Washington, DC. <http://www.eia.doe.gov/emeu/aer/contents.html>

U.S. DOE/EIA 2006c—U.S. Department of Energy, Energy Information Administration. *EIA-819 Monthly Oxygenate Report, Historical.* Various reports. <http://www.eia.doe.gov/oil_gas/petroleum/data_publications/monthly_oxygenate_telephone_report/motr_historical.html>

U.S. DOE/EIA 2006d—U.S. Department of Energy, Energy Information Administration. *International Energy Annual 2004.* Table H.1gco2. Posted July 21, 2006. <http://www.eia.doe.gov/pub/international/iealf/tableh1gco2.xls>

U.S. DOE/EIA 2006e—U.S. Department of Energy, Energy Information Administration. *Monthly Energy Review*. Washington, DC: July 2006. <http://www.eia.doe.gov/emeu/mer/contents.html>

U.S. DOE/EIA 2006f—U.S. Department of Energy, Energy Information Administration. *Quarterly Coal Report: October–December 2005*. <http://www.eia.doe.gov/cneaf/coal/quarterly/qcr_sum.html>

U.S. DOE/EIA 2006g—U.S. Department of Energy, Energy Information Administration. *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 2005 Annual Report*. DOE/EIA-0216(2005). Washington, DC: November 2006. <http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/current/pdf/arr.pdf>

U.S. DOE/NERAC and GIF 2003—U.S. Department of Energy, Nuclear Energy Research Advisory Committee, and Generation IV International Forum. *A Technology Roadmap for the Generation IV Nuclear Energy Systems*. CD-ROM December 2002. Washington, DC. <http://gif.inel.gov/roadmap/>

U.S. DOS 2002—U.S. Department of State. *U.S. Climate Action Report 2002: Third National Communication of the United States of America Under the United Nations Framework Convention on Climate Change*. Washington, DC: May 2002. <http://www.gcrio.org/CAR2002/>

U.S. DOT 2006a—U.S. Department of Transportation, Bureau of Transportation Statistics. *National Transportation Statistics 2006*. <http://www.bts.gov/publications/national_transportation_statistics/>

U.S. DOT 2006b—U.S. Department of Transportation, Center for Climate Change and Environmental Forecasting. *Strategic Plan 2006-2010*. Washington, DC. <http://climate.volpe.dot.gov/plan/splan_2006.pdf>

U.S. EPA 2005—U.S. Environmental Protection Agency. *Air Emissions Trends—Continued Progress Through 2004*. Accessed August 18, 2005. <http://www.epa.gov/ttn/chief/net/index.html>

U.S. EPA 2006a—U.S. Environmental Protection Agency. *Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States*. EPA 430-F-06-006. Washington, DC: February 2006. <http://epa.gov/cleanenergy/pdf/gta/guide_action_full.pdf>

U.S. EPA 2006b—U.S. Environmental Protection Agency. *Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks*. EPA530-R-06-004. Washington, DC. <www.epa.gov/climatechange/wycd/waste/SWMGHGreport.html>

U.S. EPA/OAP 2002—U.S. Environmental Protection Agency, Office of Atmospheric Programs. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2000*. EPA 430-R-02-003. Washington, DC: April 2002. <http://yosemite.epa.gov/OAR/globalwarming.nsf/content/ ResourceCenterPublicationsGHGEmissionsUSEmissionsInventory2002.html>

U.S. EPA/OAP 2006a—U.S. Environmental Protection Agency, Office of Atmospheric Programs. *Excessive Heat Events Guidebook*. EPA 430-B-06-005. Washington, DC: June 2006. <www.epa.gov/heatisland/about/pdf/EHEguide_final.pdf>

U.S. EPA/OAP 2006b—U.S. Environmental Protection Agency, Office of Atmospheric Programs. *Global Anthropogenic Emissions of Non-CO_2 Greenhouse Gases 1990-2020*. Washington, DC: June 2006. <http://www.epa.gov/nonco2/econ-inv/international.html>

U.S. EPA/OAP 2006c—U.S. Environmental Protection Agency, Office of Atmospheric Programs. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2004*. EPA 430-R-06-002. Washington, DC: April 15, 2006. <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

U.S. EPA/OAR 2006—U.S. Environmental Protection Agency, Office of Air and Radiation. *ENERGY STAR® and Other Climate Protection Partnerships: 2005 Annual Report*. EPA 430-R-06-014. Washington, DC: October 2006. <http://www.epa.gov/appdstar/pdf/CPPD2005complete.pdf>

U.S. GAO 2005—U.S. Government Accountability Office. *Climate Change: Federal Reports on Climate Change Funding Should Be Clearer and More Complete*. GAO-05-461. Washington, DC: August 25, 2005. <http://www.gao.gov/new.items/d05461.pdf>

WGA 2004—Western Governors' Association. *Creating a Drought Early Warning System for the 21st Century: The National Integrated Drought Information System*. Denver, CO: WGA, June 2004. <http:// www.westgov.org/wga/publicat/nidis.pdf>

Webster et al. 2005—Webster, P.J., G.J. Holland, J.A. Curry, and H.-R. Chang. "Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment." *Science* 309(5742):1844-46. <http://www.sciencemag.org/cgi/content/full/sci;309/5742/1844>

Westerling et al. 2003—Westerling, A.L., T.J. Brown, A. Gershunov, D.R. Cayan, and M.D. Dettinger. "Climate and Wildfire in the Western United States." *Bulletin of the American Meteorological Society* 84(5):595-604. <http://ams.allenpress.com/perlserv/?request =get-abstract&issn=1520-0477&volume=084&issue=05&page=0595>

Zervas 2001—Zervas, C.E. *Sea Level Variations of the United States 1854-1999*. NOAA Technical Report NOS CO-OPS 36. Silver Spring, MD: National Oceanic and Atmospheric Administration, National Ocean Service.